

# AquaVantage 1400 GD

Bruhin's Highest Technology Immersion / Ultrasonic Detergent

Bruhin's highest technology immersion/ultrasonic detergent. Our best solution significantly expanding tank life and simplifying tank maintenance. Built from Bruhin's Formula 815 GD technology but improved with no phosphates, stable silicates and better pH buffering leading to improvements in cleanability and corrosion inhibition. No hazardous materials or chelants provides a safer work environment and minimizes disposal costs. Does not contain any petroleum or chlorinated solvents, butyl, other glycol ethers, or acids. Low caustic levels. For use in a wide range of industries, OEM and rebuild.

## BENEFITS

- High technology cleaning for all parts in immersion and ultrasonic applications
- Minimizes bath maintenance creating labor savings
- Significantly expands bath life reducing costs
- Retards silicate deposits for cleaner parts and labor savings
- In-process corrosion control
- "One product" parts cleaner for virtually all metals including steels, aluminum and titanium
- Greener product 13 ways, more user and environmentally friendly, reducing costly paperwork:
  1. No hazardous ingredients
  2. No SARA Title 3, Section 313 reportable
  3. No ozone depleting substances
  4. No global warming potential
  5. No CERCLA reportable
  6. No RCRA reportable
  7. No phosphates
  8. Low caustic
  9. No glycol ethers
  10. No butyl
  11. No chelants
  12. Recycles easily
  13. Biodegradable
- Transmits ultrasonic cavitation at all temperatures
- Free rinsing for faster, cleaner parts

## DILUTION RATES

Light soils	5%	1:20	6.5 oz/gal	50mL/L
Normal soils	10%	1:10	13 oz/gal	100mL/L
Heavy soils	15%	1:7	20 oz/gal	150mL/L

AquaVantage 1400 GD significantly expands bath life and simplifies tank maintenance

## CHEMICAL CHARACTERISTICS

Physical Form:	Liquid
Color	Light yellow to yellow-green
Fragrance	Mild
Weight	8.97 lbs/gal.
Specific Gravity	1.078
Viscosity	Water-thin
Phosphate-free	Yes
pH of Concentrate	12.0 +/- 0.2
pH of 10% Dilution	11.3 +/- 0.2
Flash Point	None to boiling
Foaming Tendency	Medium to high
Cloud Point	None to boiling
V.O.C.'s	0.0% wgt.; 0.0 g/l
Freeze/Thaw	Remix after thawed-out
Shelf Life	1 Year
Total Active	19.6 +/- 0.2% Solids

## SUGGESTED PROCESS CLEANING RANGES

Application:	Immersion or ultrasonic cleaning
Dilution Rate:	5-30%; typically used at 10%
Temperature Range:	130-180°F; typically used at 140-150°F.
Cleaning Duration:	1-30 minutes; typically parts are clean in 3-10 minutes for OEM applications, may be longer in rebuild industries.
Rinsing:	For precision cleaning applications, it is recommended that the final rinse be maintained at or below 500 microsiemens. For ultra-clean applications, 50 microsiemens or below can be used. For gross cleaning, higher standards may be adopted.

Note: To avoid spotting, it's best if the parts remain wet between processing stages.

## AQUAVANTAGE 1400 GD – PERFORMANCE PROPERTIES

### SUBSTRATES

Bruhin's AquaVantage 1400 GD is non-corrosive and non-staining to a wide variety of alloys including aluminum, copper, mild steel, titanium, elastomers and polymers. The following alloys have been tested in accordance to test method ARP 1755B, stock loss test:

Aluminum	Magnesium
• AMS 4037	• AMS 4375
• AMS 4045	• AMS 4434; (AZ92)
Cadmium Plated Steel	Ni-Cad Plating
• AMS 5504/AMS 2400	• AMS 5504/AMS 2416
Copper Alloy	Nickel Alloy
• AMS 4507	• AMS 5504/AMS 2424;
Electroplated Panels	Nickel plating
• AMS 5504/AMS 2400	Steel
• AMS 5504/AMS 2416	• AMS 5040/AMS2424;
• AMS 5504/AMS 2424	Carbon Steel
	Titanium Alloys
	• AMS 4911

Although this information is believed to be accurate, to insure desired results, testing should be done with the contaminants in question.

### TESTING COMPLIANCE

- ARP 1755-B: Stock Loss Test
- ASTM F-519-97, Type 1A.1: Hydrogen Embrittlement Test

### SOILS

AquaVantage 1400 GD has been found to successfully remove a wide range of organic and inorganic soils as typically found in OEM and rebuild facilities. This includes:

Antibac 250	Lubrication Oil
Beef Tallow	Mobil 600
Bluecoat 5000XX	Machine Coolant
Brayco 756	Machining Oils
Cimflo #20	Mil-H-5606
CRC Soft Seal	Mil Marks
Dioctylphthalate	Metal Fines
Farbest 7220; Antirust oil	Particulate
Finger Grease	Plater's Wax (prior cleaned with boiling water)
Forming Oils	Rust Preventive
Grease Pencil	Safety Draw 700
Greases	Sani-Tuff
HD2 Grease	Titanlube 1129
Houghton-Draw	• 3105
• 3105	• PF400
• PF400	• 7007
• 7007	Hydraulic Fluid
Hydraulic Fluid	Lanolin
Lanolin	WD-40

Although this information is believed to be accurate, to insure desired results, testing should be done with the contaminants in question.

## CONCENTRATION VERIFICATION

### Bruhin Titration Kit (Prod. No. XTRKIT)

Sample Size: 5mL  
 Titrant: 1.0 N Acid Solution  
 Indicator: Bromophenol Blue  
 Concentration %: Drops Titrant x 0.46

### Burette Test Method

Sample Size: 50mL  
 Titrant: 0.5 N Acid Solution  
 pH Endpoint: 4.50  
 Concentration %: mL's Titrant x 0.837

### OR

Sample Size: 50mL  
 Titrant: 0.5 N Acid Solution  
 pH Endpoint: 3.80  
 Concentration %: mL's Titrant x 0.787

### SAFETY

#### CAUTION

May cause eye irritation. Prolonged contact may cause skin irritation. Rubber gloves recommended for prolonged handling. Avoid direct contact. Do not ingest.

#### FIRST AID:

**Eye Contact** – Flush with large amounts of water for 15 minutes, lifting upper and lower lids occasionally. Remove contact lenses if present. Get immediate medical attention.

**Skin Contact** – Wash with mild soap and water. Remove contaminated clothing and launder before reuse. If irritation develops/persists, consult a physician. **Ingestion** – Give two or more glasses of cold water or milk to drink. If vomiting does occur, give fluids again. Keep warm and quiet. Never give anything by mouth to an unconscious person. Get immediate medical attention.

**KEEP OUT OF REACH OF CHILDREN**

#### HMS HAZARD RATING

Health	1
Flammability	0
Reactivity	0
PPE	B

### PACKAGING, STORAGE & DISPOSAL

Bruhin's AquaVantage 1400 GD is available in:

- 5 gallon pails
- 55 gallon drums
- 275 gallon returnable totes
- 275 non-returnable totes
- Up to 5,000 gallons (45,000 lbs.) bulk

Bruhin's AquaVantage 1400 GD should be stored in well-ventilated areas at temperatures between 4 and 49°C (40 and 120°F). The recommended shelf life of this product is one year.

Bruhin's AquaVantage 1400 GD is biodegradable and can be pretreated by skimming and/or filtering. Final sewerability is determined by the municipal sewer district covering the plant location.

Manufactured by:

**BRULIN & COMPANY, INC.**

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PRODUCT NUMBER

**431037**